LESSON MAKER PRO

Fraction Groups

Show equal groups with bars and equations

GRADE 4 · 4.NOS.E.13.d

4.NOS.E.13.d "Solve problems in context involving multiplication of a fraction by a whole number, using visual fraction models and equations to represent the problem."

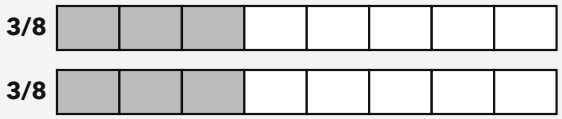
NAME _____ DATE _____

THE BIG IDEA

Multiplying a fraction by a whole number means adding equal groups of that fraction. Show each group with an equal-size bar, then write an equation to find the total.

WORKED EXAMPLE

Find 2 x 3/8.



1. The bars show two groups of 3/8.
2. Add: 3/8 + 3/8 = 6/8.
3. Simplify: 6/8 = 3/4.

Answer: 2 x 3/8 = 3/4

PRACTICE 4 problems

1 Find 4 x 1/5. Sketch bars and write an equation.

ANSWER _____

2 Find 5 x 4/9. Sketch bars and write an equation.

ANSWER _____

3 Find 6 x 1/7. Sketch bars and write an equation.

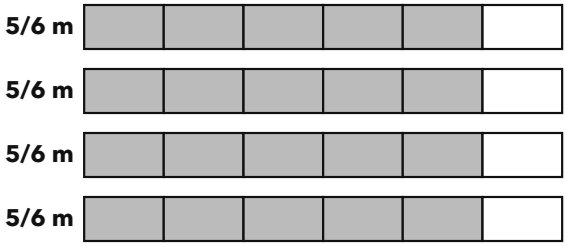
ANSWER _____

4 Find 7 x 5/10. Sketch bars and write an equation.

ANSWER _____

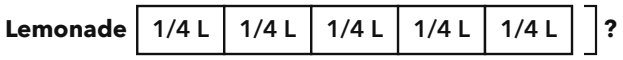
APPLY IT Show your work

1 Four players each use 5/6 meter of ribbon for a team flag. How many meters do they use in all? Use the bars and write an equation.



ANSWER _____

2 Five friends each drink 1/4 liter of lemonade. How many liters do they drink in all? Use the strip and write an equation.



ANSWER _____

CHALLENGE One step up

A class makes 7 cards. Each card takes 4/5 sheet of paper. Do they need more than 5 sheets? Sketch bars and write an equation to explain.

WORK SPACE AND ANSWER

ANSWER KEY

Fraction Groups

GRADE 4 · 4.NOS.E.13.d

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find 4 x 1/5. Sketch bars and write an equation.	**4 bars with 1/5 shaded in each; 4 x 1/5 = 4/5**
2	Find 5 x 4/9. Sketch bars and write an equation.	**5 bars with 4/9 shaded in each; 5 x 4/9 = 20/9 = 2 2/9**
3	Find 6 x 1/7. Sketch bars and write an equation.	**6 bars with 1/7 shaded in each; 6 x 1/7 = 6/7**
4	Find 7 x 5/10. Sketch bars and write an equation.	**7 bars with 5/10 shaded in each; 7 x 5/10 = 35/10 = 3 1/2**

PART 2 · APPLY IT

1. **4 x 5/6 = 20/6 = 3 1/3 meters** The four bars show 20 shaded sixths in all. That is 20/6 meters, or 3 1/3 meters.
2. **5 x 1/4 = 5/4 = 1 1/4 liters** The strip has five equal parts of 1/4 liter. Together they make 5/4 liters, or 1 1/4 liters.

CHALLENGE

Yes. Seven bars with 4/5 shaded in each show 7 x 4/5 = 28/5 = 5 3/5 sheets, which is more than 5 sheets.

Accept equivalent fractions and mixed numbers. Bar sketches should show equal-size wholes divided into the stated number of equal parts.